Searching for Deep Disagreement in Logic: The Case of Dialetheism

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Abstract
According to Fogelin's account of *deep disagreements*, disputes caused by a clash in *framework* propositions are necessarily rationally irresolvable. Fogelin's thesis is a claim about real-life, and not purely hypothetical, arguments: there *are* such disagreements, and they *are* incapable of rational resolution. Surprisingly then, few attempts have been made to find such disputes in order to test Fogelin's thesis. This paper aims to rectify that failure. Firstly, it clarifies Fogelin's concept of *deep disagreement* and shows there are several different breeds of such disagreements. Thus, to fully assess Fogelin's thesis, it will be necessary to seek out cases of each breed to evaluate their rational irresolvability. Secondly, it begins this task by looking at a significant debate within the logical literature over the truth of contradictions. We demonstrate that, while the debate exemplifies a breed of deep disagreement, the parties involved can supply one another with rationally compelling reasons.

Keywords Deep disagreements · Fogelin · framework propositions · logical disputes · dialetheism · contradictions

1 Introduction: Deep Disagreement and Logic

There are *deep* disagreements, and they are immune to rational resolution. These are the two main claims of Fogelin's "The Logic of Deep Disagreement":

> **Deep Disagreement**: There exist *deep* disagreements.
>
> **Rational Resistance**: All *deep* disagreements are rationally irresolvable.

Neither thesis entails the other. One could admit that while there exist *deep* disagreements, at least some of them are capable of rational resolution, thereby accepting *Deep Disagreement* while rejecting *Rational Resistance*. Inversely, one could deny there are any *deep* disagreements while admitting that if there *were* any then indeed they would be rationally irresolvable. Both theses, then, require independent justification.

Given that Fogelin endorses both, we are faced with answering two questions:

- Are there any *deep disagreements*?
- Are these disagreements always immune to rational resolution?

Fogelin's thesis is not intended as a conceptual truth about the rational immunity of a purely hypothetical breed of argument. Rather, his claim is that certain real-world disagreements, such

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as the well-known debates over abortion and positive discrimination, are immune to rational resolution due to their nature. Fogelin (1985, p. 5) is concerned that logic is in danger of missing the nuance of "genuine arguments that are complex and pressing," which requires recognising those which, for principled reasons, somehow inoculate themselves from rational solutions. Consequently, to substantiate Fogelin's thesis, it won't be enough to demonstrate that deep disagreements would be rationally unresolvable if any were to exist. We must look to real-life arguments for plausible candidates of deep disagreements to support or undermine Fogelin's thesis.

Given this, it's somewhat surprising that although significant time has been spent evaluating *Rational Resistance* in the abstract (Feldman 2005, Godden and Brenner 2010), little attention has been paid to how argumentation within plausible real-life cases of deep disagreement is conducted and evolves, and ultimately whether the parties involved can supply each other with rationally compelling reasons.[1] This paper rectifies this failing, looking to a real-life dispute to consider whether Fogelin's claims reflect argumentative practice.

To do so, we look to an area of inquiry we would expect to be prone to such disagreements, logic. Much of our other knowledge requires us to presuppose that we possess certain logical knowledge or abilities. Consequently, it wouldn't be surprising if we were to find that there existed disagreements between competing schools of logic immune to rational resolution due to reaching the 'epistemic bedrock'.

Particularly, we look to one of the more sustained debates within modern logic between dialetheism and classical logic over the truth of contradictions. Given the historical importance that the presumption that contradictions cannot be true has played within philosophy, this seems a suitable choice. If we should expect a rationally irresolvable debate within the academic literature, this would be it.

The paper runs as follows. Section 2 clarifies Fogelin's theses, and shows that his own discussion allows for several different breeds of deep disagreement, which are suitably delineated. Section 3 explains why logical disputes should be fertile grounds for deep disagreements. Section 4 outlines the dialetheism debate and explains how it exemplifies one breed of deep disagreement, and section 5 shows that despite this both parties are still able to provide one another with rationally compelling reasons.

2 What is *Deep* Disagreement?

Imagine we are old friends reminiscing about our misspent youth attending baseball games. As is bound to happen the Cubs come up in conversation, and I mention off-hand that they won the World Series last season (2016-17). You stare at me in disbelief, shaking your head. You haven't been following the sport recently, you admit, but the Cubs have been *dreadful* for a long time. I agree, they have been, but still insist they managed to break their 107-year drought. If you ask for evidence, in the modern world I can produce it through numerous sources: video of the event, news reports, and records. All, almost instantly, over the internet. It's hard to deny it now, you admit, and accept the initially unbelievable truth.

[1] There are some exceptions here, notably Adams (2005), which highlights the practical difficulties parties face in recognising when a disagreement is deep.

This is a realistic, if banal, argumentative exchange in which the parties initially disagree over the truth of a proposition regarding a sports team's achievements, but *generally* agree over what would constitute evidence for and against the claim. Such exchanges are what Fogelin (1985, p. 3) refers to as *normal arguments*. There is a common argumentative environment of background assumptions among the parties within which reasons can be shared and recognised.

In contrast to these *normal arguments* are cases where there is a lack of shared commitments, and particularly a clash between important *framework propositions*. It is in just these cases that we have *deep* disagreement. What, though, are these *framework* propositions?

Here, unfortunately, the matter isn't clear. Fogelin gives us very little, referring to the work of Putnam and Wittgenstein in describing them (Fogelin 1985, p. 5). We are told they provide the "structure within which reasons can be *marshalled*, where marshalling reasons is typically a matter of citing facts that others already know or of arranging facts in a way that their significance becomes clear," (Fogelin 1985, p. 3). Yet, this description leaves important questions unanswered. For example, is accepting these propositions a *precondition* for providing *any kind of reasons* whatsoever? If so, are these propositions *rationally indefeasible*? Additionally, if such propositions are preconditions for providing reasons, is there just one adequate set of these propositions, or are there several equally *enabling* sets? We require answers to these questions, and Fogelin does not explicitly provide them. In our quest for answers we can begin by looking to one of the authors Fogelin cites as a source, Wittgenstein.

In his own description of these epistemically important propositions, Wittgenstein prefers the analogy of a hinge:[2]

> The *questions* that we raise and our *doubts* depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which we turn. That is to say, it belongs to the logic of our scientific investigations that certain things are *indeed* not doubted… We just *can't* investigate everything, and for that reason we are forced to rest content with assumption. If I want the door to turn, the hinges must stay put.
>
> (Wittgenstein 1975, §§341-3; cf. §115, §337)

Two properties of these "hinge" propositions are immediately apparent. Firstly, they are required to *investigate the truth of other claims* and, secondly, they are *exempt from doubt*. The process of providing reasons for our beliefs presupposes the existence of certain propositions "[lying] apart from the route travelled by inquiry" (Wittgenstein 1975, §88). It is these propositions that provide the "inherited background against which [we] distinguish between [what is] true and false" (Wittgenstein 1975, §94), and thus must be exempt from doubt if they are to serve this role.

Note that nothing said so far demonstrates that a proposition *p* which is a "hinge" for some individual *I* must be a "hinge" for everyone; *p* may very well be a "hinge" proposition for *I* while failing to be for some other individual *I´*.[3] Nor does the fact that *p* is exempt from doubt for some individual *I*, because *p* is a "hinge" for *I*, entail that *p* is essentially *rationally*

[2] Though he also refers to such propositions as constituting the "scaffolding" of our thoughts (Wittgenstein 1975, §211), and our "picture of the world" producing a background for reasons (Wittgenstein 1975, §94).

[3] Indeed, Wittgenstein (1975, §§611-3) seems to consider this possibility.

indefeasible. It may simply be that in order for *p* to be rationally defeasible for *I*, *p* must lose its important epistemic status as a "hinge" for *I*.

Thus, even if we take Fogelin's claim seriously, and treat Wittgenstein's "hinges" as a progenitor of *framework* propositions, there are still two important questions left unanswered:[4]

i) Must all individuals endorse the same *framework* propositions?

ii) Are *framework* propositions by definition rationally indefeasible?

To answer these questions, we must look at how *framework* propositions fit into Fogelin's justification for *Rational Resistance*, that deep disagreements are beyond rational resolution.

Fogelin's argument is grounded in two claims. Firstly, *deep* disagreements are defined as those in which there is a "clash in underlying principles" (Fogelin 1985, p. 5), the aforementioned *framework* propositions. Secondly, a shared background of these propositions is a *necessary* condition for rational argumentation. Combined, these claims demonstrate that the nature of deep disagreements preclude rational resolution. Unlike normal argumentative exchanges, in which there exist "shared procedures for resolving disagreement," (Fogelin 1985, p. 3), the lack of these shared commitments in *deep* disagreements precludes rational resolution.

While *deep* disagreements may look like arguments, smell like arguments, they are no such thing, for "the conditions for argument do not exist". While the "language of argument may persist…it becomes pointless since it makes an appeal to something that does not exist; a shared background of beliefs," (Fogelin 1985, p. 5). It isn't then that the parties are unable to reach a rational resolution because they are pig-headed or acting in bad faith. Deep disagreements, we are told, simply fail to possess the properties necessary for argumentation to exist. On every occasion in which one side of the debate proposes a reason to advance their conclusion, the other side will fail to recognise the force of the reason, as such force relies upon unshared assumptions.

At this stage, some clarification is required. On occasion, as in the quote above, Fogelin speaks as though the parties in a deep disagreement share *no* "background of beliefs". Yet, it's clear that Fogelin does not, and cannot, set the bar for deep disagreements this high. If the requirement was that there is no intersection between parties' beliefs then deep disagreements would be disagreements by name only. In order to disagree, parties must hold inconsistent sets of propositions, whether in the form of contradictory propositions, or sets of propositions that entail contradictory propositions. Yet, holding inconsistent propositions requires parties at minimum to share certain beliefs regarding the objects being referred to, and the putative properties of those objects under dispute. Otherwise we simply have parties talking past one another. That this can happen is without doubt, yet this is not supposed to be the case within deep *disagreements*. These are disagreements, just disagreements of a special kind. Deep disagreements, therefore, do not require the parties to have disjoint belief sets.

[4] While Fogelin's discussion was undoubtedly inspired by Wittgenstein's talk of "hinges", there are significant complications facing anyone attempting to identify Wittgenstein's "hinges" with Fogelin's *framework* propositions, such as Wittgenstein (1975, §110 and §204) ultimately talking in terms of *acting*, rather than *accepting* fundamental propositions. Unfortunately, a consideration of these complications is beyond this paper's scope. See Godden and Brenner (2010) for a detailed discussion of Fogelin's thesis in light of Wittgenstein's claims in *On Certainty*.

Further, as Fogelin makes clear elsewhere, nor do the parties need to disagree on every proposition relevant to the debate. When discussing the case of abortion, he states that one of the features of deep disagreements is that they persist even though there is agreement on many relevant claims:

> Parties on opposite sides of the abortion debate can agree on a wide range of biological facts…yet continue to disagree on the moral issue. Their disagreement can even survive a general agreement on moral issues: for example, on the sanctity of human life. (Fogelin 1985, p. 5)

So, when Fogelin speaks of deep disagreements arising due to a lack of a "shared background of beliefs", he is being too casual. Rather, his point is that there are a certain set of privileged propositions, *framework* propositions, such that a lack of shared commitment to *these* ensures parties are unable to effectively marshal reasons against each other's positions.

Clarity over Fogelin's argument for *Rational Resistance* goes a significant way to answering our questions over *framework* propositions. Firstly, it's clear that not every individual is required to believe the same set of *framework* propositions. After all, if everyone were required to believe the same set of *framework* propositions in order to instigate the reason-giving game, this would flat out preclude the "clash of framework propositions" (Fogelin 1985, p. 5) required for deep disagreements. Consequently, we must insist there is no single set of propositions everyone must hold. Rather, there are numerous available sets. This highlights that, as different individuals can possess different *framework* propositions, so particular propositions can gain or lose their privileged status of being a *framework* proposition within an individual's belief set. What is in doubt is *how* that can happen—whether these *framework* propositions can be disregarded and changed on the basis of rational means or not.

Secondly, Fogelin's argument for *Rational Resistance* provides us with strong reasons to think that *framework* propositions are not by definition rationally indefeasible. By proposing that *deep* disagreements are rationally unresolvable, Fogelin is claiming that two positions premised on inconsistent framework propositions are immune to rational resolution. Yet, if by definition *framework* propositions were not up for rational debate, then *Rational Resistance* would be true *by definition*. Simply in virtue of being *rationally indefeasible* propositions, debates grounded on *framework* propositions would be rationally irresolvable, as a rational resolution of the debate would require one of these disputed *framework* propositions to be rationally defeated. Yet, as mentioned earlier, *Rational Resistance* has been fruitfully debated within the literature, a possibility which would be precluded by defining framework propositions as rationally indefeasible. Of course, this does not preclude the possibility that *framework* propositions turn out to be rationally indefeasible, but such a conclusion should be the result of substantial philosophical work, rather than stipulation. We should not then integrate rational indefeasibility into Fogelin's definition of *framework* propositions.

The same conclusion is suggested by textual evidence. While Fogelin (1985, p. 3) claims that *framework* propositions are used to marshal reasons, supporting non-framework propositions, nowhere does he suppose these propositions are by definition rationally indefeasible. The important question for Fogelin is not whether these framework propositions are *by definition* rationally indefeasible, but whether disagreements due to a clash in these justificatory and structurally important beliefs can be resolved by rational means.

We now have a good grasp of what *deep* disagreements are, Fogelin's argument for *Rational Resistance*, and the special features of *framework* propositions. Before we move on to evaluating Fogelin's theses, however, two further matters require clarification.

Firstly, Fogelin speaks of *deep* disagreements being *incapable of rational resolution*. What does he mean exactly? Firstly, Fogelin certainly does not mean that there are *practical barriers* to rationally resolving the debates, whether this be due to boredom, fatigue, a lack of money, relevant evidence, or even ingenuity. This disagreement should persist even when the participants have inexhaustible patience, energy and resources. The rational irresolvability is due, instead, to the intrinsic and structural properties of the debate—that there is a "clash" of framework propositions. Similarly, Fogelin does not simply mean that the parties involved will never reach an agreement on the matter through rational means. After all, it is possible that a dispute between competing scientific research programmes fails to be resolved, *even though* both sides recognise the strengths and weaknesses of each other's programmes. They may simply each have extremely high threshold levels for giving up their own programmes (and research money!). Instead, Fogelin means something stronger. It is "not the weak claim that in such contexts arguments cannot be settled. It is the stronger claim that the conditions for argument do not exist," (Fogelin 1985, pp. 4-5). Thus, to say that the disagreements are *incapable of rational resolution* means that no party within the debate could provide another with *rationally compelling reasons* to either reject their own position, or accept their opponent's. As we shall see below in section 5, this demonstrates that in order to challenge *Rational Resistance* we are not under an obligation to outline the conditions under which a *deep* disagreement *would be* rationally resolved. Instead, we only need show that the relevant parties are able to provide one another with rationally compelling reasons.[5]

What are *rationally compelling reasons*, exactly? They are reasons that require us to recognise a relative weakness in our own position, or a strength in another's position. It is exactly these reasons which exist in normal argumentative settings, whether between researchers or friends. Nothing about the existence of these reasons ensures that one side will concede, or be 'rationally forced' to concede. Indeed, it is hard to know what 'being rationally forced' could mean. Yet, as noted above, Fogelin does not require that we outline the conditions under which one would be rationally forced to "settle" the debate, but instead that the conditions for argument, the giving *and recognising* of reasons, exist.[6]

Secondly, we must clarify what Fogelin (1985, p. 5) means by a "clash" of framework propositions in his depiction of deep disagreements. There are two subtleties here. Firstly, it's unclear from Fogelin's discussion whether a *clash* requires the parties to hold contradictory framework propositions, such that one party *I* must hold some proposition *p*, which is a framework proposition for *I*, and the other party *I´* holds ¬*p*, which is a framework proposition for them. To use Fogelin's abortion case, this would require a pro-life advocate to hold some proposition *p*, say that "Foetuses are people with a right to life" as a framework proposition, and the pro-choice camp to hold the contradictory, "Foetuses are not people with a right to life", also as a framework proposition. Call this a *strong clash* of framework propositions.

[5] I thank an anonymous referee for pushing me on this point.

[6] Indeed, if we were so required to sketch out the conditions under which one party would be rationally required to accept their opponent's position, then not only would the target *deep disagreements* fail the test of rational resolvability, but so would most (if not all) complex debates between research programmes.

This is not the only way to interpret "clash". There are two further possibilities. Firstly, one party holds some proposition *p* as a framework proposition, while the disagreeing party believes ¬*p*, but does not treat it as a framework proposition. Instead, it could be a consequence of other framework propositions and auxiliary claims. Within the abortion debate, this would be the pro-choice advocate, rather than endorsing "Foetuses are not people with a right to life" as a framework proposition, accepting the proposition as a consequence of the framework proposition "Only entities with a functioning cerebral cortex are people" and certain empirical findings. Call this a *weak clash* of framework propositions.

Lastly, there is the possibility of a *distant clash* of framework propositions. This is where the target propositions under dispute, *p* and ¬*p*, are framework propositions for neither party, but are supported by the parties' respective framework propositions (in combination with auxiliary propositions). Within the abortion debate, this would be the parties disagreeing over "Foetuses are people with a right to life" but neither party treating this or its negation as a framework proposition. Rather, say, the pro-life advocate could be treating "Every Church teaching is true" as a framework proposition, and the pro-choice advocate treating "Only entities with a functioning cerebral cortex are people" as a framework proposition.[7]

As using Fogelin's own example of the abortion debate to describe these types of clash makes clear, each is a viable interpretation of the notion, and thus suitable for study.[8] Nor should we assume that *weak* or *distant* clashes will be any less troublesome than *strong* clashes.

The second subtlety here is the *extent* of the disagreement over framework propositions. By this we mean whether the relevant parties share *some* framework propositions or *none*. Call a clash *complete* when the two parties fail to share any framework propositions, and *partial* if they disagree over certain framework propositions, but share others.

As with our interpretation of the *type* of clash, it may seem obvious that it is *complete* clashes which constitute real and proper deep disagreements. After all, as above, Fogelin talks of deep disagreements being due to a lack of shared background beliefs. We should resist the temptation, however, to associate deep disagreements solely with *complete* clashes for two reasons. Firstly, Fogelin admits with his own example of the abortion debate that the two parties can agree on important moral principles, such as the sanctity of life. We could go further and say that both sides of the debate are often committed to other important propositions, such as "There is a moral distinction between persons and inanimate objects" and "If foetuses are persons, then they have a right to life". It would seem presumptive to assume that, in virtue of the parties sharing belief in these proposition, they cannot be framework propositions. They hold the same weighty epistemic status Fogelin (1985, p. 5) gives to propositions such as "Persons are entities with immortal souls".

Secondly, and even more importantly, given that Fogelin commits himself to the existence of these deep disagreements, we shouldn't preclude talk of *partial* clashes until we have looked at real-life cases, as this form of clash may be the best Fogelin can hope for. Yes, it may be that disagreements which are *complete* are more likely to be immune to rational resolution, and thus make *Rational Resolution* true. But, at the same time, we may be unable to find any cases of

[7] Note that, on the assumption that the parties agree on the truth of the auxiliary propositions, a *distant clash* can always be transformed into a *weak clash* by making one of the framework propositions the target proposition under dispute. In reality, of course, this does not always happen.

[8] Indeed, while at first sight it may seem obvious that *strong clashes* are the *proper* cases of deep disagreement that Fogelin had in mind, once we take Fogelin's own example of the abortion debate seriously this type of clash seems the least relevant!

such severe disagreements, thus putting the truth of *Deep Disagreement* into doubt. In advocating both theses, Fogelin must walk the fine line of providing an account of deep disagreements which are severe enough in their clashes to make *Rational Resistance* true, but realistic enough so as to make *Deep Disagreement* true. Further, as we shall see with our case study, it is easy, before great argumentative effort and ingenuity is given over a dispute, to assume that a disagreement is *complete*, rather than *partial*. Consequently, we should not at this stage take either complete or partial clashes off the table. Both are suitable for study—it may turn out that partial clashes are the best Fogelin can hope for.[9]

In providing this clarification to Fogelin's notion of *clash*, six distinct breeds of deep disagreement emerge, in accordance with this schema:

> **DD:** Disagreements over some set of propositions Γ that involve a *strong*/*weak*/*distant* and *complete/partial* clash in framework propositions.

Let the following acronyms serve to denote each breed:

Breed of DD	*Complete*	*Partial*
Strong	**DD-StC**	**DD-StP**
Weak	**DD-WkC**	**DD-WkP**
Distant	**DD-DsC**	**DD-DsP**

This categorisation of deep disagreements should provide the necessary framework in which to discuss the truth of both *Rational Resistance* and *Deep Disagreement*. An important future task for the literature is to find examples of real-life arguments fitting each characterisation, thus verifying *Deep Disagreement* for that breed of **DD**, and enquiring whether these disagreements are indeed immune to rational resolution or not, testing *Rational Resistance* for each breed. Verifying the joint truth of *Deep Disagreement* and *Rational Resistance*, therefore, now becomes the more nuanced matter of verifying them relative to a *breed* of **DD**.

This paper begins that project by looking at a disagreement within logic, over the truth of contradictions. As we shall argue, the disagreement appears to be a **DD-WkP** in which both sides are able to provide rationally compelling reasons—at least some breeds of deep disagreement are rationally resolvable.

3 Logic, A Fertile Ground for Deep Disagreement

In searching for deep disagreements, logic should be the most fertile ground, due to two interrelated reasons. Firstly, logic is fundamental to many of our claims to further knowledge. We use logic to reason about scientific hypotheses, produce mathematical proofs, and engage in argumentation. Consequently, the use of logic is all pervasive, and necessary in order to construct reasons for other non-logical propositions. Secondly, because much of our knowledge presupposes the use of logic, it's unclear how we can use evidence from these other domains to either support or undermine logical beliefs. In other words, when there is a logical

[9] For precedent that we ought to treat *partial* clashes as constituting deep disagreements, see Davson-Galle (1992).

disagreement, there is nothing to *fall back upon* to act as evidence to resolve the disagreement. Thus, logical propositions seem *prima facie* excellent cases of framework propositions—their truth never (or, rarely) enters into conversation, and logical rules of inference are necessary in order to "provide the framework or the structure within which reasons can be marshalled" (Fogelin 1985, p. 3).

Further evidence of the special epistemic role that logical propositions are thought to play is provided by the two most historically prominent accounts of logical knowledge, *logical rationalism* and *semanticism*. According to these accounts, logical knowledge is either a direct result of intuition or definitions, respectively. Consequently, if one disagrees over the truth of a fundamental matter of logic, one just doesn't *see* what is obvious (BonJour 1998), or one has misunderstood the definition (Carnap 1937). In such cases there is little that can be done to reconcile these differences other than to further educate one's interlocutor in the hope they have the *right kind* of intuition, or appropriately understand what the logical terms mean. If the interlocutor *still* doesn't accept the proposition at hand then either they are refusing to accept the obvious, or playing a different game.

Logic, then, would seem fertile ground for *deep* disagreement, with its plausible candidates for *framework* propositions. By looking at logical disputes we can hope to find examples of deep disagreement, providing us with a means to test Fogelin's theses. Obviously, a detailed consideration of multiple logical disagreements is beyond this paper's scope, and so we will need to pick our case. Here we consider one of the most substantial challenges to modern logical orthodoxy, dialetheism. Given the extent to which dialetheism recommends a revision of some of our most treasured logical principles, the debate would seem an excellent starting point in the search for a deep disagreement, and thus a means to test their rational resolvability.

4 The Dialetheism Debate

The law of non-contradiction (LNC) has held an exalted status throughout the history of both philosophy and the sciences, with Aristotle calling it the "most certain of all principles" (1924, Γ1005b18). So certain has the principle been that few arguments throughout the history of philosophy have been given for it. Indeed, on the rare occasion that arguments have been proposed for the principle, such as Aristotle's famous defence in the *Metaphysics*, the arguments end up only supporting the law by presupposing some version of it (Priest 2006b, Ch. 1). This perhaps would not be surprising to Aristotle, as he suggested that knowing the principle is a precondition for knowing anything (1924, Γ1005b17).

That no contradiction can be true is a given for most philosophers is suggested not only by the fact that definitions of 'contradiction' regularly offer contradictions as simply necessarily false propositions (Cook 2009, p. 68), but by the fact that the principle clearly plays a fundamental structural role in the reason-giving game. A few examples here will suffice. Firstly, when scientists persistently collect data which contradicts the predictions of a theory, unless the troublesome findings can be otherwise explained away, this is considered to be a problem for the theory *because contradictions cannot be true*. Secondly, contradictions serve as the ultimate error message, black mark, of a theory—a result that we cannot accept in any sense (Rumfitt 2010, p. 36). It is for exactly this reason that *reductios*, the most powerful argumentative tool philosophers and mathematicians have at their disposal, are valid. Once one has shown that a proposition, potentially in combination with background assumptions, entails

a contradiction, this is enough in and of itself to conclude that the proposition is false. Thirdly, in combination with the meaning of the Boolean connectives, it is the falsity of contradictions which supports inferences as fundamental as *modus tollens* ($\{A \rightarrow B, \neg B\} \vDash \neg A$) and the disjunctive syllogism ($\{A \vee B, \neg A\} \vDash B$). If contradictions can be true, then these rules of inference need not be valid, as we shall see below.

Consequently, for the classical logician (and many working scientists) the proposition that "No contradictions are true" seems a paradigm example of what Fogelin means by a framework proposition. It provides the very mechanism through which we can demonstrate the falsity of theories, both using *reductio* and empirical evidence, and is so fundamental to the reason-giving game that on those rare occasions arguments have been provided for the principle, one simply ends up presupposing it at some point. In sum, we have a framework proposition for a significant group of working philosophers, mathematicians, and scientists.

However, despite this famous principle holding the status of a framework proposition for many, it has recently come under a sustained attack from dialetheism, the theory that some contradictions are true (Priest 2006a, p. 1). While there may have been past advocates of dialetheism, motivated by matters such as the concept of motion and change (see Priest 1995), it was with the modern dialetheic solutions to the self-referential logico-semantic paradoxes (Priest 2006b) that dialetheism found its most persistent and successful motivation. In what follows, we will be interested particularly in the debate between classical logicians and those contemporary dialetheists motivated solely by such paradoxes (e.g., Beall 2009).[10]

According to dialetheists, these paradoxes have evaded successful non-dialetheic solutions not because of a lack of effort or rigour on the logician's part, but due to an inherent flaw that all non-dialetheic solutions share (Priest 2006b, Ch. 1-2). Take for example the most famous of these paradoxes, the liar sentences, of which the Strengthened Liar is one example:

(λ) $\ulcorner\lambda\urcorner$ is not true.

In his formal analysis of the concept of truth, Tarski (1944) provided reasons to believe that any language L in which,

i) Any sentence s in L can be named by a term t belonging to L, and
ii) L's own semantics can be expressed within the language (e.g., that sentence s is true),

can produce a liar sentence. These two conditions are known as the *semantic closure* of a language. Additionally, Tarski showed that through endorsing the intuitively plausible unrestricted T-schema,

$$T(\ulcorner A\urcorner) \equiv A$$

[10] Of course, dialetheists and classical logicians are not the only parties involved in the debate over the self-referential paradoxes—gappy logicians disagree with both. However, this isn't a concern for us here. The debate between dialetheists and classical logicians itself constitutes a disagreement, and thus is sufficient to test Fogelin's *Rational Resistance*. But, we are confident that what we have to say about this debate is transferrable to the wider debate including other non-classical logicians.

and some uncontroversial logical rules, it can be shown that any such language L is inconsistent:

$\lambda \equiv \neg T(\ulcorner \lambda \urcorner)$	(L1–Strengthened Liar)
$T(\ulcorner \lambda \urcorner) \equiv \lambda$	(L2–Instance of T-Schema)
$T(\ulcorner \lambda \urcorner) \equiv \neg T(\ulcorner \lambda \urcorner)$	(L3–From L1-L2 by transitivity)
$T(\ulcorner \lambda \urcorner) \vee \neg T(\ulcorner \lambda \urcorner)$	(L4–Instance of LEM)
$T(\ulcorner \lambda \urcorner) \wedge \neg T(\ulcorner \lambda \urcorner)$	(L5–From L3-L4 by cases and adjunction)

The result is obviously incompatible with fundamental tenets of classical logic. Firstly, contrary to the LNC, some contradictions are true, and secondly, some propositions are *both true and false*.[11] Thus, either classical logic must be revised, restrictions must be placed upon languages' semantic closure, or the T-schema must be restricted. Tarksi's (1956) own suggestion was to restrict semantic closure through a hierarchy of languages. The dialetheist, however, argues that restricting languages' semantic closure or the T-schema will be ultimately unsuccessful. Either because these solutions are *incomplete*, by allowing revenge versions of the paradox to arise, unnecessarily *limit the expressibility* of languages, distorting the meaning of perfectly acceptable natural-language sentences, or provide *ad hoc* fixes to a substantial philosophical problem (Priest 2006b, Ch. 1). Instead, we ought to bite the bullet and accept the conclusion of the paradox—there are true contradictions, and so one must reject classical logic.

The dialetheist not only rejects classical logic, however, by admitting certain contradictions as true. They must endorse a different logic, one appropriate to their own commitments. These logics have three essential properties (Martin 2018), being:

> **Dialetheic**: A logic L is *dialetheic* iff L permits contradictions, formally conceived as formulae of the form $A \wedge \neg A$, to be true in an interpretation.
>
> **Paraconsistent**: A logic L is *paraconsistent* iff, for some formulae of the form A and B, $\{A, \neg A\} \nvDash_L B$.
>
> **Strongly Paraconsistent**: A logic L is *strongly paraconsistent* iff, for some formulae of the form A and B, $\{A \wedge \neg A\} \nvDash_L B$.[12]

Dialetheists require their logics to possess each of these properties in order to ensure true contradictions can be accommodated without *trivialism*, the thesis that every proposition is true, ensuing; a commitment most dialetheists wish to avoid (Priest 2004).

Not all logics possessing one of these properties have the rest. For example, Jennings and Schotch's (1984) preservationist logics are *paraconsistent* but neither *strongly paraconsistent* nor *dialetheic*. There are, however, some logics which possess all three properties, the most famous being Priest's (2006b, Ch. 19) *Logic of Paradox* (**LP**). As with Dunn's (1976) four-

[11] Given that untruth entails falsity in classical semantics: $\neg T(\ulcorner \varphi \urcorner) \rightarrow F(\ulcorner \varphi \urcorner)$.

[12] While these conditions constitute the core requirements of a dialetheist's logic, they are not the only criteria used by dialetheists to evaluate a logic's appropriateness. For example, dialetheists often wish for their logic to respect the normal semantics for the Boolean connectives. For this reason, Priest's **LP** is preferred to da Costa's (1974) $\mathbf{C}_i (1 \leq i \leq \omega)$ logics. See Martin (2018).

valued semantics for *First Degree Entailment*, valuations in **LP** are conceived as relations ε from a propositional language $\mathcal{L}$ to the set {1, 0}, but with the restriction that each member of $\mathcal{L}$ takes *at least one* truth-value. Thus, propositional parameters may be assigned the truth-value *true*, *false*, or *both* true *and* false in an interpretation.[13] The Boolean connectives are then given their normal semantics:[14]

$(A \wedge B)\varepsilon 1$ iff $A\varepsilon 1$ and $B\varepsilon 1$
$(A \wedge B)\varepsilon 0$ iff $A\varepsilon 0$ or $B\varepsilon 0$

$(A \vee B)\varepsilon 1$ iff $A\varepsilon 1$ or $B\varepsilon 1$
$(A \vee B)\varepsilon 0$ iff $A\varepsilon 0$ and $B\varepsilon 0$

$(\neg A)\varepsilon 1$ iff $A\varepsilon 0$
$(\neg A)\varepsilon 0$ iff $A\varepsilon 1$

Combined with the usual definition of logical consequence in terms of truth-preservation,

$\Sigma \vDash_{LP} B$ iff for all ε, if $A\varepsilon 1$ for all $A \in \Sigma$, then $B\varepsilon 1$,

LP possesses some interesting properties. Firstly, while it allows a contradiction $A \wedge \neg A$ to be true within a valuation (let $A\varepsilon 1$ and $A\varepsilon 0$), given the meaning of negation and conjunction above, every contradiction is also always false. That is, at most a contradiction is both *true* and *false*, never simply *true*. This means that the standard formulation of the LNC, $\neg(A \wedge \neg A)$, is a theorem of **LP**.[15] Secondly, **LP** invalidates important classically valid inferences, including:

- Explosion: $\{A, \neg A\} \vDash B$
- *Modus ponens*: $\{A, A \rightarrow B\} \vDash B$
- The disjunctive syllogism: $\{A \vee B, \neg A\} \vDash B$
- *Reductio ad absurdum*: $\{B \rightarrow (A \wedge \neg A)\} \vDash \neg B$[16]

Consequently, dialetheists' commitment to true contradictions, combined with the wish to hold certain other commitments, ensures they also disagree with classical logicians on a host of other matters, including whether some propositions are both true and false, and the validity of the rules of inference above.

These considerations allow us to draw two initial conclusions. Firstly, according to the distinctions made in section 3, we have a *weak* clash of framework propositions here. A *weak* clash because the proposition that "No contradictions are true" is a framework proposition for

[13] One can also provide a truth-functional semantics for **LP**, however there are good reasons for preferring a relational semantics; see Martin (2018).
[14] With the material conditional $A \rightarrow B$ defined in the usual way, $\neg A \vee B$.
[15] In fact, **LP** has the same set of theorems as classical logic (Priest 2006b, p. 76).
[16] For countermodels to explosion, *modus ponens* and disjunctive syllogism let $A\varepsilon 1$ and $A\varepsilon 0$ but only $B\varepsilon 0$, and for *reductio* let $A\varepsilon 1$ and $A\varepsilon 0$ but only $B\varepsilon 1$.

the classical logician, but the dialetheist's contradictory claim that some contradictions are true is not a framework proposition for them. Instead, they provide independent reasons to support it. Consequently, what we have here is either a **DD-WkC** or **DD-WkP**, depending on whether the divergence over framework propositions is complete or partial—a matter we shall come to.

Secondly, by disagreeing with the classical logician over a framework proposition which plays such a fundamental role within the reason-giving game, the dialetheist has also thrown much else up in the air by invalidating within her logic important rules of inference. Consequently, we must expect considerable disagreement between the parties over how evidence *can be marshalled* in support of their conclusions. Particularly important is the parties' disagreement over the validity of *reductio*. While, historically, one of the most powerful methods to refute a theory was to show that it entailed a contradiction, for the dialetheist demonstrating that a contradiction arises from their commitments will have no effect—"you have just brought another true contradiction to our attention," they will say. Indeed, the dialetheist is under no rational obligation to renege on their commitments simply because one shows that a proposition they endorse contradicts their position. They can simply agree with you.

With so much argumentative ground undercut, there is good reason to think the debate would support Fogelin's theses. Both camps have found their own reflective equilibrium, but lack the means to rationally move the other. Such an impression is certainly supported by initial responses to dialetheism. Some suggested that dialetheists were simply guilty of mental confusions (Slater 2007), and others that dialetheism only seemed plausible because they had changed the meaning of 'contradiction' (Jennings and Schotch 2009, p. 31). Dialetheists are simply mistaken, either because they fail to *see the obvious*, that contradictions cannot be true, or fail to appreciate the correct definition of 'contradiction'. Consequently, so the response goes, dialetheists are simply talking about a completely different subject to the classical logician when they maintain that contradictions are true—the parties are bound to talk at cross purposes, and ultimately come to an impasse.

Further, the debate meets another of Fogelin's (1985, p. 5) suspicions of deep disagreements, that both parties can agree on many matters of fact while still disagreeing on the substantive issue. For example, the dialetheist can agree that, because formulae of the form $\neg(A \wedge \neg A)$ are theorems of their logic, once they admit one true contradiction an infinite number follow through adjunction, without being perturbed.

As an expression of these concerns over the viability of the debate, no one has provided a clearer articulation than David Lewis in his reply to Priest and Beall's invitation to contribute to a collection on the subject:

> I'm sorry; I decline to contribute to your proposed book about the 'debate' over the law of non-contradiction. My feeling is that since this debate instantly reaches deadlock, there's nothing much to say about it. To conduct a debate, one needs common ground; principles in dispute cannot of course fairly be used as common ground; and in this case, the principles *not* in dispute are so very much less certain than non-contradiction itself.
>
> (Lewis 2004, p. 176)

Even if there are some shared commitments left, none could compensate for such a monumental loss. Appearances, however, can be misleading. We will show that, although a deep

disagreement, both sides are able to supply the other with *rationally compelling reasons*. They are able to do this because, while the clash in framework principles is very real, it is also *partial*. Consequently, due to considerable argumentative ingenuity, the debate is able to make progress.

5 Common Ground

In this section we argue that the dialetheism-classical logic debate constituted of a *weak* clash of framework propositions is rationally resolvable. In order to demonstrate this, it will not be necessary to supply specific reasons that would be *sufficient* for a resolution. Theory choice within any area is never that simple. There is rarely, if ever, a *crucial experiment*. It would, therefore, be pure folly to attempt to specify the conditions under which the debate would be resolved. Rather, to meet the challenge set by Fogelin's *Rational Resistance*, our task is to show that both sides in the debate can supply rationally compelling reasons to the other—that each side can give the other reasons for thinking their position is weaker than originally thought, or that their opponent's is comparatively stronger. This we will show by arguing that both parties within the dialetheism debate can *reframe* the argument around fundamental rational values held by the other side (and sometimes shared). Indeed, if dialetheism were simply a rejection of the LNC, then the debate might be beyond rational resolution, or even comprehension. However, what is so compelling about the dialetheist's argument is that they aim to demonstrate to the classical logician that their fundamental rational values are in tension with one another. The classical logician, in reply, aims to show that dialetheism does not deliver on its promises. To demonstrate how both sides are able to offer rationally compelling reasons, let us revisit the dialetheist's argument based upon the liar.

As far as the dialetheist is concerned, dialetheism provides the best available response to the philosophical problems raised by the liar paradox. Classical, along with other, solutions in contrast fail to provide an adequate and comprehensive solution.

Dialetheists criticise other solutions to the liar on three scores. Firstly, they are *incomplete*, for although they may provide a solution to one of the liar paradoxes, out of this solution other revenge liars arise which cannot be solved by the same means. This is the dialetheist's classic response to gappy solutions (Priest 2006b, pp. 12-16). While proposing truth-value gaps may solve,

(δ) $\ulcorner\delta\urcorner$ is false

the same approach will not work for the Strengthened Liar,

(λ) $\ulcorner\lambda\urcorner$ is not true.

In virtue of being truth-value gappy, (λ) is indeed *not true*, and thus what it says about itself is true. So, (λ) turns out to be both gappy and true.

Secondly, non-dialetheic solutions require us to unnecessarily restrict the meaningfulness of natural-language sentences—that is, unnecessarily restrict *expressiveness*. As liar sentences are a product of the semantic closure of languages and the unrestricted T-schema, a non-dialetheic solution would require one to restrict the expressive power of natural-languages by

banning "the expressibility of certain key concepts [e.g. truth]…from the language," (Priest 2006b, p. 24). Yet, we are fully aware that the English sentences these solutions require us to deem meaningless are not, for they are the simple result of linguistic devices sanctioned by the language. In contrast, by not restricting semantic closure or the T-schema, the dialetheic solution respects languages' expressibility.

Lastly, the dialetheist criticises other solutions for being *ad hoc*, that is, not based upon principled reasons. It is "not in doubt that we can avoid paradoxes if we can make any move we like… [consequently, a putative solution to the liars] not backed up by an independent rationale is just an intellectual fraud," (Priest 2006b, p. 14). Thus, making any move necessary to avoid the contradiction which follows from the liar sentences is simply to lack intellectual integrity. What we need, instead, is a principled and unifying solution to all of the liar paradoxes, and according to the dialetheist, this solution just is to admit their conclusions!

In criticising other solutions using these three criteria, the dialetheist is both appealing to rational values held by others within the logical community, and taking on the rational obligation to demonstrate that her own solution fails to suffer from these faults or, at least, suffers from them to a lesser extent than others.

Now, perhaps if the classical logician hesitated and suggested there was no need for logic to accommodate tricky cases like the liar, debate would stagnate and no compelling reasons could be given either way. However, we find no such hesitation. There is a general agreement that the liar is a paradoxical case that should be accommodated by one's logic. This is demonstrated by the numerous attempts to resolve the paradox, whether this be Tarski's own attempt to rescue classical logic by restricting semantic closure, or more contemporary attempts to show that non-dialetheic solutions are not susceptible to revenge liars (Murzi and Rossi 2018). Not only this, but there is agreement in the non-dialetheic literature that solutions to the liar must be independently motivated, and not restrict the meaningfulness of natural-language sentences simply in order to save a logical theory.[17] In other words, despite calling into question a fundamental framework proposition of classical logic, through argumentative ingenuity the dialetheist has facilitated debate by appealing to the classical logician's other rational commitments. At base, the dialetheist proposes that the classical logician's commitment to consistency is incompatible with these further rational commitments, forcing the classical logician to consider the viability of the LNC, which up to this point had been beyond doubt.

We can see then that the dialetheist is able to provide rationally compelling reasons to the classical logician. The question now is, are classical logicians able to supply any reasons which are rationally compelling for the dialetheist in return? The answer is a resounding yes.

As we have seen, while rejecting certain fundamental tenets of classical logic, dialetheists do commit themselves to rational standards in arguing for a dialetheic solution to the liar. Consequently, if one could show that dialetheic responses to the liar sentences were *incomplete*, *ad hoc*, or *restricted expressiveness* to a greater extent than a classical approach, this would constitute a serious challenge to the dialetheic research programme, and provide support for classical logic *even in the eyes of the dialetheist*.

Further, dialetheists have been at pains to emphasise that in virtue of endorsing *some* contradictions as true, this in no way ensures they have given up other norms of rationality, such as proportioning one's beliefs to the available evidence (Priest 2004). The dialetheist is

[17] See, for example, Kirkham's (1992, Ch. 9) criticisms of various non-dialetheic solutions along these lines.

not devoid of *any* guidelines for rationally evaluating theories just because she accepts certain contradictions as true. Indeed, the reason why she believes we ought to accept certain contradictions as true is because we have *excellent reasons* for doing so (Priest 2004). The dialetheist simply disagrees with the classical logician that consistency ought to be the golden benchmark for a theory (Priest 2006a, Ch. 7). Consequently, there are wider rational commitments that the dialetheist holds (Priest 2004, 2006a, Ch. 7):

Non-triviality: Not every proposition is true.

Non-absurdities: Our theories should not entail absurd consequences.

Evidence: Our endorsement of any proposition should be motivated by evidence.

These additional commitments ensure that one could undermine the dialetheist's position by demonstrating it entailed an unsavoury consequence. While this unsavoury consequence might not be a contradiction *per se*, it may be a contradiction with a certain content which is independently absurd, or a non-contradictory absurdity that the dialetheist cannot stomach. Neither of these argumentative manoeuvres are precluded by the dialetheist's endorsement of contradictions.

Consequently, this opens up a second avenue with which the classical logician can provide the dialetheist with compelling reasons. In addition to providing a classical solution to the liar paradoxes which fit the defined criteria better than the dialetheic response, she can provide reasons for thinking that even if the dialetheic solution is better according to these criteria, its wider costs are just *too high*, based upon the recognised rational commitments above. To show that these avenues are available to the classical logician, let us give several examples from the literature.

Firstly, it has been argued that dialetheic semantics are themselves *expressively deficient*. As was first recognised by Parsons (1990), the dialetheist cannot effectively disagree with another party's espousal of p in the usual manner by expressing that 'p is false'. After all, the fact that p is false for the dialetheist does not preclude p's truth. Nor will it be enough for the dialetheist to say, 'p is false *and* p isn't true', for p could *also* be true. Just like any other proposition, 'p isn't true' could be both true *and* false, and thus a contradiction could arise. Consequently, the dialetheist will have to find another means to *express disagreement*, unless their theory is to be *expressively deficient*.

That the dialetheist considers this *expressive deficiency* a rationally compelling criticism is not only demonstrated by the criteria she uses in criticising non-dialetheic solutions to the liar, but by the fact dialetheists feel the need to respond. Priest (2006a, Ch. 6) has attempted to remove this expressive deficiency by proposing that the dialetheist expresses disagreement not through her semantics, but rather with pragmatics. She disagrees with some claim p by *denying that* p, rather than *asserting that* $\neg p$. After all, for the dialetheist, one could be fully committed to the truth of both p and $\neg p$, and thus *assert* $\neg p$ while also *asserting* p. Consequently, the act of *denying that* p is in no sense identical to *asserting that* $\neg p$ for the dialetheist. Whereas an assertion of some proposition p communicates one's *acceptance of* p (a mental act), the denial of p is a *sui generis* speech-act which communicates the *rejection of* p (another mental act).

Given that one cannot simultaneously accept and reject a claim, the *denial* of *p* properly excludes the *assertion* of *p*, and thus expresses disagreement with another's assertion of *p*.

This is not the end of the story though. While the dialetheist may be able to successfully communicate disagreement through pragmatics, the dialetheist's inability to use her own semantics to preclude a proposition's truth or falsity entails further problems, due to the existence of contexts in which *denial* cannot be successfully substituted for the semantic concept 'false only'. To concentrate on an example from Shapiro (2004), one cannot transfer the speech-act denial into a conditional sentence, 'If *p* isn't true then consequences q_1, $q_2 \ldots q_n$ follow'. After all, force operators cannot be meaningfully embedded into truth-functional contexts. Thus, the introduction of pragmatics into the dialetheist's communicative battery is simply a Band-Aid; the dialetheist's semantics still suffers from being unable to suitably express that a proposition is '*not both* true and false'. The problem of *expressive deficiency* raises its head again—according to her own commitments, the dialetheist must take seriously the need to find a means to *preclude* joint falsity and truth within her *semantics*.

Yet, as other arguments (Littmann and Simmons 2004) have shown, once the dialetheist succeeds in *forcing* mutual exclusion between truth and falsity, allowing herself to express an exclusionary 'false *only*' within her semantics, this will cause concerns elsewhere. For this expressive power will automatically preclude her from providing a solution to certain revenge liars, such as:

(ζ) ⌜ζ⌝ is false only.

If a dialetheic solution is provided to (ζ), then the sentence will turn out to be both true *and* false *only*, nullifying the exclusionary function of 'false *only*'. Thus, it appears the dialetheist must choose between her semantics being *expressively incomplete* or her solution to the liar paradoxes being *incomplete*. Given that completeness in both areas are desiderata of the dialetheist's theory, this is a rationally compelling criticism for the dialetheist.

Lastly, away from the self-referential paradoxes, it has been shown that the dialetheist's semantics commit her to the impossibility of the actual world (Martin 2015). Given the necessitation axiom and the fact that formulae of the form $\neg(A \wedge \neg A)$ are theorems of **LP**, it follows that the dialetheist is committed to $\Box\neg(A \wedge \neg A)$, for any *A*, from which it follows that $\neg\Diamond(A \wedge \neg A)$, given the interdefinability of necessity and possibility. However, this just means that it's impossible for contradictions to be true, and thus any world containing contradictions is *impossible*. Yet, according to the dialetheist, the actual world *does* contain true contradictions, and therefore is an impossible world. This is an unsavoury position for anyone, including the dialetheist. If any world fails to be impossible, it is the *actual* world, and the dialetheist has shown no inclination up to this point of doubting that (see Priest's footnote in Lewis 2004). Here again, then, is another example in which the classical logician is able to offer rationally compelling reasons to the dialetheist based upon fundamental rational expectations.

Both sides of the debate are able to supply one another with rationally compelling reasons. Rational debate is possible. Particularly, what we have presented is a deep disagreement in which, through ingenuity, both sides have been able to reframe the debate around commitments recognised by the other party despite some deep differences. Further, by digging deep enough into the parties' fundamental commitments, certain rational norms are found to apply across the debate, such as *respect for logical evidence* (in the form of the liar paradoxes). As such, we

have a **DD-WkP**—a deep disagreement with a weak and partial clash of framework propositions—that is not principally immune to rational resolution.

However, this example serves not only to show that a certain breed of deep disagreement, **DD-WkP**, is not immune to rational resolution. It also shows how easy it is to overestimate the *extent* of a clash of framework propositions. Just as Lewis suggested, when initially presented with dialetheism it would be natural to shrug one's shoulders and ask what one could possibly say in reply. Yet, even in such drastic cases where important shared territory has been lost, there can be other commitments hiding in the background that, through argumentative effort and ingenuity, can be used to marshal reasons. We must ensure, when searching for deep disagreements in the future, that we do not make the same mistake.

6 Conclusion

This paper tasked itself with two objectives. Firstly, to clarify Fogelin's thesis that deep disagreements are incapable of rational resolution. This it has achieved by way of distinguishing six breeds of such disagreements. Secondly, it has begun the much-neglected project of looking to real-life arguments in the search for deep disagreement, as Fogelin's thesis requires. Particularly, we considered the debate between the dialetheist and classical logician over the truth of contradictions, and found that the debate constituted a **DD-WkP** in which rationally compelling reasons exist. The case suggests that even if parties disagree over important framework propositions, as long as there are some shared rational values, it is possible to *reframe* the debate around these values.

Fogelin, then, was mistaken about at least one breed of deep disagreement. In order to test his claims for the other breeds, we must look again at real arguments. To support Fogelin's claims, we must not only find examples of these breeds, but demonstrate that indeed the parties are incapable of supplying rationally compelling reasons. We may have higher hopes for those deep disagreements in which no framework propositions (including, rational values) are shared. Yet, as is apparent from our case here, we must be conscious when searching for these breeds of deep disagreements that finding common ground will often be hard-fought and only evident after considerable argumentative ingenuity.

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